

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal at the intersection of MD 322 and MD 333 in Talbot County. The existing street lighting is provided on the utility poles.

MD 322 is assumed to run in a north-south direction.

II. INTERSECTION OPERATION

- The intersection is to operate in a NEMA six-phase, fully-actuated mode, with the MD 322 approaches running concurrently. The MD 333 approaches shall run as a split side street. An Exclusive-Permissive left turn phase shall be provided for both approaches of MD 322. There is an opticom detector eye provided for the southbound approach of MD 322 and both approaches of MD 333.
- A full-traffic-actuated, eight-phase controller with three (3) four-channel, rack mount loop detector amplifiers, and detector rack power supply, opticom #752 discriminator card with all necessary equipment and their harnesses housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.

III. SPECIAL NOTES:

- Upon completion of this project, the Contractor shall notify Mr. Robert Snyder at (410) 787-7631 to arrange for the phone line installation. The Contractor is to provide Mr. Robert Snyder with the nearest street address, zip code and phone number.

A. EQUIPMENT TO BE SUPPLIED BY S.H.A. AND INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
9081	1 EA.	Eight-phase, full-traffic-actuated, solid state digital controller with three (3) 4-channel, rack mount loop detector amplifiers, and detector rack power supply, and all necessary equipment housed in a NEMA size "6" base-mounted cabinet.
9089	30 S.F.	Flat sheet aluminum sign (green) consisting of: 1 EA. D3-2 "ARROW Peach Blossom RD, Peach Blossom RD ARROW" sign dual-faced, mast arm mounted, (variable x 16"). 1 EA. D3-2 "ARROW Oxford RD, Oxford RD ARROW" sign dual-faced, mast arm mounted, (variable x 16"). 2 EA. D3-2 "Eastern PKWY" sign dual-faced, mast arm mounted, (variable x 16").
9090	21 S.F.	Flat sheet aluminum sign (white) consisting of: 2 EA. R10-12 "LEFT TURN YIELD ON GREEN BALL" sign, mast arm mounted, (36" x 42").

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY THE CONTRACTOR.

ITEM NO.	QUANTITY	DESCRIPTION
1001	2 EA.	Maintenance of traffic.
2001	5 C.Y.	Test pit excavation.
5001	50 L.F.	5" yellow heat applied permanent preformed thermoplastic pavement markings.
5004	150 L.F.	24" white heat applied permanent preformed thermoplastic pavement markings.
5007	200 L.F.	Remove existing pavement markings.
8001	15 C.Y.	Furnish and install concrete foundation.
8011	4 EA.	Cut, clean, galvanized and cap traffic signal structure.
8012	3 EA.	Furnish and install 3M opticom #721 detector eye.
8016	1 EA.	Furnish and install microloop probe set with 500' lead-in.
8017	2 EA.	Furnish and install microloop probe set with 1000' lead-in.
8020	1 EA.	Install base-mounted cabinet and controller.
8023	20 L.F.	Furnish and install 1" liquid tight flexible non-metallic conduit for detector sleeve.
8024	15 L.F.	Furnish and install 2" polyvinyl chloride electrical conduit (Schedule 80) trenched.
8027	75 L.F.	Furnish and install 3" polyvinyl chloride electrical conduit (Schedule 80) trenched.
8030	30 L.F.	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) trenched.
8032	100 L.F.	Furnish and install 4" polyvinyl chloride electrical conduit (Schedule 80) bored.
8034	5 EA.	Furnish and install ground rod (3/4" dia. x 10' length).
8037	790 L.F.	Furnish and install 4-conductor opticom detector cable.
8041	1070 L.F.	Furnish and install 2-conductor electrical cable (No. 14 A.W.G.) aluminum shielded.
8044	150 L.F.	Furnish and install 5-conductor electrical cable (No. 14 A.W.G.).
8045	2000 L.F.	Furnish and install 7-conductor electrical cable (No. 14 A.W.G.).
8046	170 L.F.	Furnish and install 2-conductor electrical cable (No. 12 A.W.G.) Type IN. TC IN..

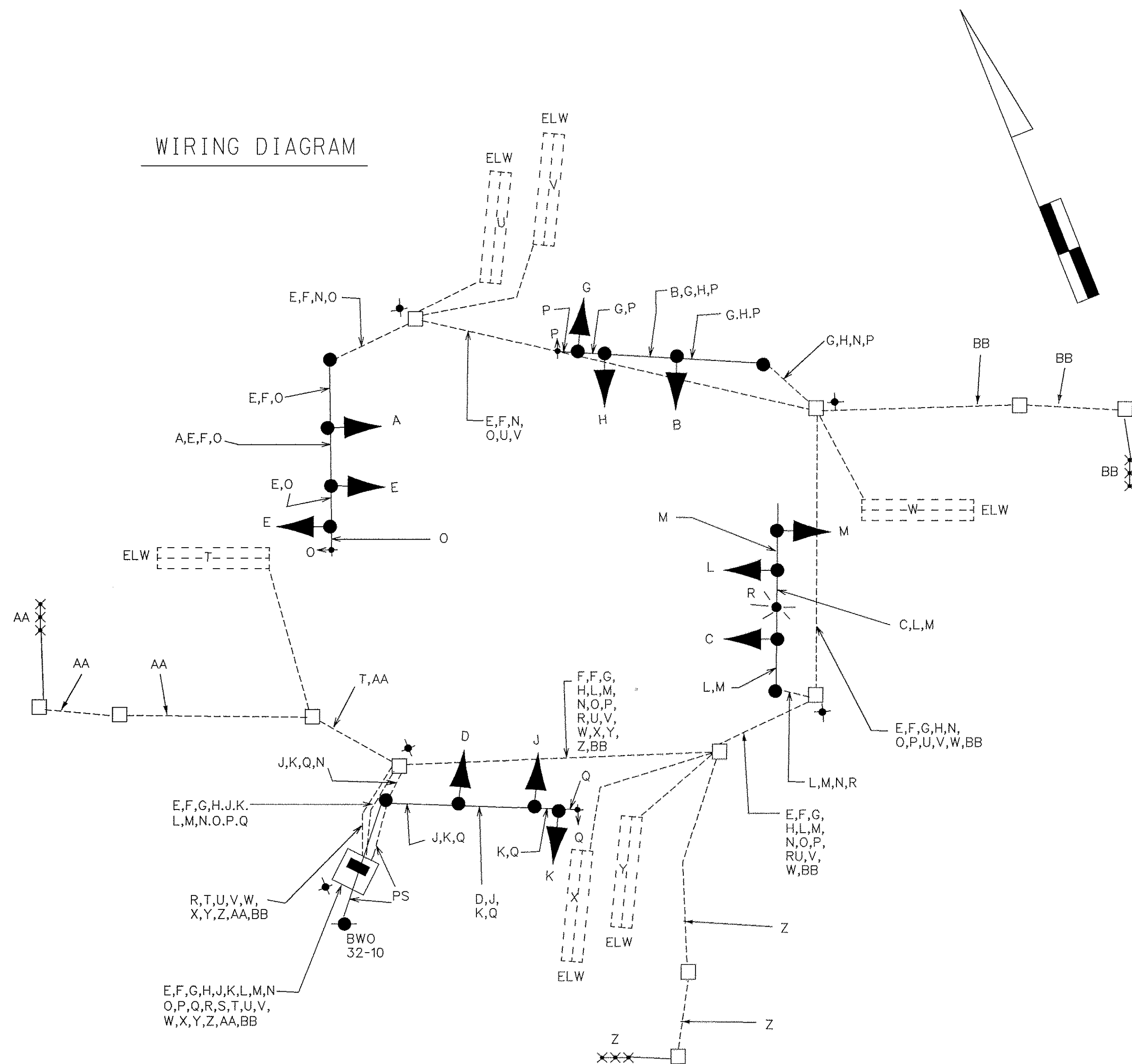
B. EQUIPMENT LIST (CONT.).

ITEM NO.	QUANTITY	DESCRIPTION
8049	360 L.F.	Furnish and install stranded bare copper ground wire (No. 6 A.W.G.).
8050	20 L.F.	Furnish and install 1-conductor electrical cable (No. 4 A.W.G.) THHN/THWN.
8053	66 S.F.	Install overhead mounted sheet aluminum sign.
8055	1 EA.	Furnish and install 250 watt HPS luminaire with photocell.
8057	4 EA.	Remove and dispose of existing foundation 12" below grade.
8058	5 EA.	Removal of existing controller, cabinet, and galvanized steel signal structure.
8059	1 EA.	Delivery of removed controller and cabinet.
8060	1 EA.	Remove and dispose of existing signal equipment.
8066	1 EA.	Furnish and install control and distribution equipment.
8077	1 EA.	Furnish and install 27' mast arm structure (cut to 21') with a 50' mast arm (cut to 44'), (4- anchor bolts 1 3/4" x 90").
8077	1 EA.	Furnish and install 27' mast arm structure with 50' mast arm (cut to 44'), (4- anchor bolts 1 3/4" x 90").
8077	1 EA.	Furnish and install 27' mast arm structure with 50' mast arm (cut to 46'), (4- anchor bolts 1 3/4" x 90").
8077	1 EA.	Furnish and install 27' mast arm structure with 50' mast arm, (4- anchor bolts 1 3/4" x 90").
8084	38 EA.	Furnish and install 12" vehicular traffic signal head section.
8085	12 EA.	Furnish and install 8" vehicular traffic signal head section.
NEG.	1 EA.	Furnish and install 20' lighting bracket arm for traffic signal structure.
NEG.	1 EA.	Furnish and install opticom #752 discriminator card.

WIRING KEY

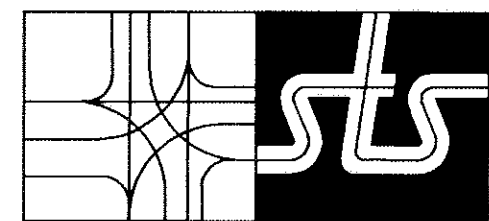
A B C D	5- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
E F G H J K L M	7- CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
N	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
O P Q	4- CONDUCTOR OPTICOM DETECTOR CABLE
R	2- CONDUCTOR (NO. 12 A.W.G.) ELECTRICAL CABLE (TYPE IN. TC IN.)
S	1- CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.) THHN/THWN
T U V W X Y	2- CONDUCTOR (NO. 14 A.W.G.) ELECTRICAL CABLE ALUMINUM SHIELDED
Z	MICROLOOP PROBE SET 500' LEAD-IN
AA	MICROLOOP PROBE SET 1000' LEAD-IN
ELW	EXISTING LOOP WIRE

WIRING DIAGRAM



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 & 5	R	R	R	R	R	R	R	R	R	R	R	R
1 & 5 CHANGE	G	G	G	G	G	G	G	G	G	G	G	G
PHASE 1 & 6	G	G	G	R	R	R	R	R	R	R	R	R
1 CHANGE	G	G	G	R	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	G	G	G	R	R	R	R	R	R
5 CHANGE	R	R	R	G	G	G	R	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	G	R	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	Y	R	R	R	R	R	R
PHASE 3	R	R	R	R	R	R	R	R	R	G	G	G
3 CHANGE	R	R	R	R	R	R	R	R	R	G	G	G
PHASE 4	R	R	R	R	R	R	G	G	G	Y	Y	Y
4 CHANGE	R	R	R	R	R	R	Y	Y	Y	R	R	R
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R



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Clermont, MD 20735

PH (410) 580-5500
Fax (410) 530-6637

P-Task333I.DGN



Office of Traffic & Safety

TRAFFIC ENGINEERING DESIGN DIVISION

MD 322 @ MD 333

DRAWN BY: MILES KY	COUNTY: TALBOT	TS NO. 154G	SHEET NO. 2 OF 2
CHECK BY: RRZ	LOG MILE: 20032201.59	T.I.M.S. NO. D457	
DATE: 01/07/00	F.A.P. NO. AC-STPG-000S(683)E		
SCALE: N/A	S.H.A. NO. XX1005185		